

Sure On

WE CLAIM AS OUR INVENTION:

1. A method for protecting a device against operation with an unallowed consumable, comprising the steps of:

- (a) storing a plurality of reference code words at a data center;
- (b) generating a code word having a predetermined relationship to at least one of said reference code words;
- (c) allocating said generated code word to a specific consumable and storing said allocation at said data center;
- (d) aggregating said specific consumable with said generated code word;
- (e) at a device located remote from said data center, detecting an operation to replace a consumable in said device with a replacement consumable corresponding to said specific consumable, said replacement consumable having a code word aggregated therewith;
- (f) upon detection of said operation, establishing a communication link between said device and said data center and communicating said code word aggregated with said replacement consumable to said data center from said device via said link;
- (g) at said data center, checking authenticity of said replacement consumable by determining whether said code word aggregated with said replacement consumable, and transmitted via said link, has said predetermined relationship with said at least one reference code word stored at said data center; and
- (h) via said link, informing said device whether said replacement consumable is authorized.

2. A method as claimed in claim 1 wherein step (d) comprises designating said generated code word on a carrier and permanently affixing said carrier to said specific consumable.

3. A method as claimed in claim 1 wherein step (d) comprises applying said generated code word on said specific consumable as a marking.

4. A method as claimed in claim 1 wherein step (d) comprises selecting a technique for aggregating said specific consumable with said generated code word dependent on a physical nature of said specific consumable.

5. A method as claimed in claim 1 wherein step (d) comprises, during manufacturing of said specific consumable at a manufacturer, generating an identification number for the specific consumable as said generated code word.

6. A method as claimed in claim 1 wherein said device is a franking machine which is loaded with a credit that is decremented upon each franking performed at said franking machine, and wherein said method comprises the additional step of maintaining a record of a credit status of said device at said data center, and wherein step (f) includes transmitting a current credit status of said device to said data center via said data link together with said code word aggregated with said replacement consumable, and wherein step (g) comprises determining, at said data center an amount of credit used by said device since an immediately preceding authorization of said replacement consumable, and from said determination of said credit used by said device, determining

at said data center a number of frankings performed by said device since said immediately preceding authorization, and classifying said device as suspect dependent on said number of frankings.

7. In a device which consumes a consumable during operation thereof, the improvement of an arrangement for protecting said device against operation with an unallowed consumable, said arrangement comprising:

a detector which generates a detector signal upon detecting an operation for replacing a currently used consumable with a replacement consumable having a code word aggregated therewith;

a microprocessor supplied with said detector signal which, upon receipt of said detector signal, establishes a communication link with a remote data center;

means for entering said code word aggregated with said replacement consumable into said microprocessor, and said microprocessor thereupon communicating said code word to said remote data center; and

said microprocessor, via said communication link, receiving a message from said data center identifying whether said replacement consumable is authorized, and said microprocessor modifying operation of said device dependent on said message.

8. An arrangement as claimed in claim 7 wherein said consumable is a liquid.

9. An arrangement as claimed in claim 7 wherein said consumable is ink.

10. An arrangement as claimed in claim 7 wherein said consumable has a non-solid aggregate state.

11. An arrangement as claimed in claim 7 wherein said consumable is a solid.

12. An arrangement as claimed in claim 7 wherein said consumable is an inking ribbon.

13. An arrangement as claimed in claim 7 wherein said consumable is an ink jet printhead with an integrated ink tank.

14. An arrangement as claimed in claim 7 wherein said consumable is a filled ink tank cassette.

15. An arrangement as claimed in claim 7 wherein said detector comprises a sensor which detects a presence of said consumable by physical interaction with said consumable.

16. An arrangement as claimed in claim 7 wherein said device is a printing device having a printer which produces a plurality of imprints, and wherein said consumable is a filled ink tank cassette connected to said printer, each of said imprints consuming ink from said ink tank cassette, and wherein said microprocessor counts said plurality of imprints to obtain an imprint count as an indication of an amount of ink remaining in said ink tank cassette.

17. An arrangement as claimed in claim 16 wherein said microprocessor determines a need for replacement of said ink tank cassette when said imprint count reaches a predetermined number.

18. An arrangement as claimed in claim 7 wherein said device is a printing device having a printer for printing a plurality of imprints, and wherein said consumable is a filled ink tank cassette connected to said printer, each of said plurality of imprints consuming ink from said ink tank cassette, and wherein said detector comprises electrodes which electrically interact with said ink in said ink tank cassette to identify an amount of ink remaining in said ink tank cassette.

19. An arrangement as claimed in claim 18 wherein said ink tank cassette has an identifier thereon identifying a type of ink contained in said ink tank cassette, said identifier being enterable into said microprocessor.

20. An arrangement as claimed in claim 7 wherein said microprocessor modifies operation of said device by disenabling further operation of said device if said message indicates said replacement consumable is not authentic.

21. An arrangement as claimed in claim 7 wherein said device further comprises a display in communication with said microprocessor, and wherein said microprocessor causes said message from said data center to be displayed on said display.